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Barriers to product innovation among the manufacturing micro, small and medium enterprises in Malawi

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Most micro, small, medium enterprises in Malawi struggle to grow and survive despite their critical role in the socio-economic development of the country. One major contributing factor is their inability to innovate. This study was therefore aimed at investigating the innovation barriers affecting the manufacturing MSMEs. The study was conducted among the 45 manufacturing MSMEs operating in the Malawi's commercial city of Blantyre. The study adopted a case study approach and employed both quantitative and descriptive approaches. Empirical data was collected using a semi-structured questionnaire and one- on- one interview. The results of the study revealed that factors such as market competition, difficulty in accessing loans, inadequate government support, labour laws, taxes and regulations in the external environment, and inadequate financial resources, lack of qualified personnel, and poor financial performance within the enterprises hamper innovation activities within the MSMEs. Results of the study also revealed that despite government efforts to promote MSMEs innovativeness, most MSMEs do not participate in such government interventions and worse still some are not even aware of the existence of such interventions. The study therefore recommends that government should intensify its efforts to provide financial support in form of soft loans, entrepreneurial training to MSMEs and promote innovation in MSMEs through relevant policies.

Key words: Micro small medium enterprises (MSMEs), innovation, barriers, manufacturing.

INTRODUCTION

Micro, small, medium enterprises (MSMEs) represent a large percentage of business population across the globe, and hence contribute immensely to the development of national economies (Yahaya et al., 2016), as they play a critical role in generating jobs and diversifying the economic base in national economies (Harvie, 2019). In Malawi, it is reported that there are almost a million MSMEs employing over a million people and generating an income of MK 326 billion, an equivalent of about 45 million USD; therefore, their contribution to the development of the Malawi economy cannot be overstressed (Finmark Trust, 2012). Given this importance, it is imperative that MSMEs remain competitive nationally and globally. However most

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MSMEs struggle to achieve sustainable growth and survive in the prevailing business environment due to so many factors, one of them being inability to engage in innovative activities (Lewandowska, 2014; Zidana, 2015).

The business environment is becoming increasingly competitive and dynamic as such businesses are forced to find the best strategies in order to stay afloat. Innovation is widely recognised as the heartbeat of any successful enterprise; successful entrepreneurship tends to be innovation-driven and also helps to generate solutions to country's social problems including high-quality education, affordable health care, clean energy and waste management, and financial inclusion. Innovation has become the very corner stone of survival and growth of businesses, and source for competiveness of SMEs (Kiveu et al., 2019; Ngugi et al., 2013).

Innovation can be defined in three different ways: as an outcome, as a process and as a mind-set (Kahn, 2018). As an outcome, innovation entails coming up with developing new products or services, new methods of production, new sources of supply, new forms of organization structure, and the development of new markets which can help to solve various problems in our society. As a process, innovation involves turning ideas into new opportunities for value creation and putting these into widely used practice. And as a mind-set, innovation entails adoption of the innovative culture by individual members of the organization in order to create a supportive organisational culture that allows innovation to flourish (Talegeta, 2014; Torres et al., 2015; Kahn, 2018). Thus innovation relates to change in a firm's activities and based on this understanding, innovation can be of four types: product innovations, process innovations, organisational innovations and marketing innovations (OECD, 2018). However, the development and introduction of any of these innovations can be systematic or ad hoc: systematic innovation consists of purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation whereas ad hoc innovation is when it doesn't follow a particular formal process. It can also be accidental when it just emerges in the course other activities and was not initially intended to be such (OECD, 2018). Furthermore, innovation can also be characterised or distinguished for being radical or incremental; radical innovation involves the introduction of a completely new product or process, while incremental innovation involves improvements to existing products or processes (Egbetokun et al., 2009).

Irrespective of the type and the emergence of the innovation, it has been widely accepted that innovation is the most important characteristic associated with competitive and successful MSMEs; innovation helps MSMEs grow, survive and gain competitive position (Adam et al., 2020; Kiveu et al., 2019; Falahat et al., 2018; Ismail et al., 2014). However it has been observed that the Malawian MSMESs lag behind on innovations (Zidana, 2015). This is evidenced by the Global Competitiveness report by the World Economic Forum which ranks Malawi on position 132 out of 137 countries on the Global Competitive Index (Scwab, 2018). This means that Malawi is the 6th least competitive country in the world. Such a poor ranking clearly indicates that Malawian businesses especially MSMEs which are in their large numbers are not very innovative and hence remain uncompetitive. In order to promote innovation culture among the MSMEs, the Malawi Government has been putting in place various policies and strategies such as the Science, Engineering, Technology and Innovation (SETI) policy (UNESCO, 2015), the introduction of the Malawi Innovation Challenge Fund (Beakal, 2019), the Malawi Growth Development Strategies I, II and III, (Bingu et al., 2011; International Monetary Fund, 2007) among others. However, despite these government efforts the MSMEs continue to face so many obstacles which inhibit their development and growth. This study was therefore conducted to explore the innovation barriers affecting the growth of manufacturing MSMEs in Malawi. Further the study sought to assess the MSMEs' knowledge of innovation, awareness of any government intervention to promote innovation activities, and their participation in such interventions. The study also sought to assess whether the MSMEs are engaged in any innovation activities and the challenges affecting innovation activities of the MSMEs.

MATERIALS AND METHODS

The study was conducted among the manufacturing MSMEs operating in Blantyre, the biggest commercial city of Malawi and employed a mixed methodology research design where both quantitative and qualitative methods were used. Empirical data was collected using a semi-structured questionnaire and one- to- one in-depth interviews from 45 MSMEs located in different areas and townships of the Blantyre city (Blantyre flea market, Chemusa, Chilimba, Chitawira, Kabula, Kamba, Kameza, Kudya, Likhubula, Lunzu, Machinjiri, Mbayani, Ndirande, Trade Fair Grounds, Zingwangwa, and Bangwe). The participating MSMEs were purposively selected as the study targeted only MSMES that were active in business producing food and non-food items and having at least one employee. Data was collected from different sources in order to achieve data triangulation. And, in order to ensure confidentiality of the information sought, the participants were assigned numbers as their identity. Participation in the study was voluntary and an agreement (respondent consent) form was signed by both parties.

The questionnaire was designed to establish respondents' opinion about product innovation issues and government intervention to promote innovation activities. It was also designed to establish internal and external factors that were affecting innovation activities of the MSMEs. The questionnaire was administered as a hard copy, directly to the respondents in order to enhance response rate and in addition, selected business owners and officials from a learning /research institution (Universities/Colleges) and SMEDI officials were followed up with one to one interviews to obtain in-depth data on the topic. Qualitative data gathered was first given codes in form of numbers. The quantitative data was divided into two distinct groups namely categorical and numerical. With the aid

Table 1. Number of workers employed by MSMEs**.**

No. of people employed by each firm	No. of MSMEs	MSMEs (%)	Average number of employees by each category
1 – 4 (Micro)	35	89.7	2
5-20 (Small)	3	7.7	13
>20 (Medium)	1	2.6	36
Total	39	100	4

Table 2. Highest Educational Qualification of MSMEs owners.

Highest Qualification	No. of MSMEs	Percentage
Degree	2	5
Diploma	3	8
MSCE	20	51
JCE	5	13
PSLCE	2	5
Certificate	5	13
None	2	5
Total	**39**	**100**

of the Statistical Packages for Social Sciences (SPSS), data was entered and a data matrix containing cases and variables (Catterall, 2000) was generated. Descriptive (or nominal data) data represented those variables which were impossible to define in category or numerically such as owners' opinion on what government needed to do to promote innovation in MSMEs. Discrete data represented whole numbers (integers) such as the number of employees recruited and number of new products made. Ranked (ordinal) data was also obtained from the rating or scale questions, such as where a respondent is asked to rate how strongly she or he agrees with a statement. These were used to identify the strength of various internal and external product innovation barriers among Malawian MSMEs. To ensure trustworthiness, the scientific rigor criteria used in qualitative methodology which assesses the credibility, dependability, transferability and conformability of the findings was also used (Polit and Beck, 2010).

RESULTS AND DISCUSSION

Demographic data collected included year of establishment, number of employees, sources of funding, highest qualifications of MSME owners, opportunities for trainings, availability of business plans and existence of other business investments. Out of the 45 questionnaires distributed to various respondents, 39 out of 45 were responded to representing a response rate of 86.7%.

The MSMEs under study were established as early as 1974. However only 5% of the MSMEs were established in the period 1964 to 1993 and the majority (95%) of them were established after the year 1994. This coincides with the dawn of multiparty dispensation in Malawi. Malawi attained its independence from the British colonialists in 1964 and for three decades (1964 to 1993), the country was under one party dictatorship. Thus the dawn of multiparty democracy in Malawi is characterised by, among other things, the boom of MSMEs.

According to the definition of micro, small and medium enterprises in Malawi (Doh and Kim, 2014), 89.7% of the MSMEs under study fell in the category micro enterprises and these on average had 2 employees; 7.7% were small enterprises and had 13 employees on average whereas 2.6% were medium enterprises and had 36 employees (Table 1). The majority of the MSME owners had secondary school qualification (JCE and MSCE) as their highest qualification (64%) and only 13% had postsecondary qualifications, which are diploma and degree. Only 5% had primary school qualification whilst 5% had other certificates (Table 2).

These results indicate that the MSMEs are dominated with owners of low-level education. This could negatively affect the innovativeness of the MSMEs and adoption of the same as intellectual capacity of the SME is critical for its innovativeness (Omerzela and Jurdanab, 2016). Knight et al (2010) found that schooling encourages innovation and adoption of the same. Chi and Qian (2010) also found workers' tertiary education to be significantly and positively related to provincial innovative activities measured by invention patent applications per capita. Thus level of education of the MSMEs could prove to be an internal barrier to the innovation of the MSMEs.

On financing the establishment of the MSMEs, results also revealed that 74% were established using personal savings, 18% with family funds whilst 2.5% got financial support from friends and another 2.5% got financial capital from banks. Thus, a total of 94.5% of the MSMEs

Table 3. Other investments for the participants.

Investment	Frequency	Percentage
MSME owners with other business investments	9	23.1
MSME owners without any other business investments	27	69.2
Total	36	92.3
Missing responses	3	7.7
Total	**39**	**100**

relied on personal savings and support from family and friends to start up their businesses with only 2.5% of the MSMEs getting support from financial institutions to start up their businesses. This could be attributed to lack of government support and tendency of banks to favour big firms as their rates of interest are unreasonably high (Zidana, 2016). Failure to raise adequate funds for their operations has serious repercussions on the operations of the businesses such as low levels of investments and ultimately on their innovation activities (Brancati, 2015). Access to financing has been singled out as one of the key institution based barrier to innovation (Zhu et al., 2012). Clearly, MSMEs in this study need alternative financing sources. In this regard, there is need for the government to step up in its efforts to support the MSMEs financially so that the MSMEs remain competitive in a global market and survive. This can be achieved through development of public policy aimed at supporting and encouraging the innovation among SMEs (Madrid-Guijarro et al., 2009). Such policies should ensure that the cost of capital is low enough to enhance financing access by SMEs (Zidana, 2016). Apart from relying on personal savings and support from family and friends, the results also indicated that the majority of the MSMEs had limited business opportunities (Table 3) with 69.2% MSMEs having no other business investment whilst 23.1%.

This again supports the need for MSMEs to seek alternative financing sources if they are to develop, survive and remain competitive; hence the need for government to offer support in terms of financing. Training has been proven to be one of the significant predictors of employee innovativeness and it is recommended that training among small firms should go beyond on-job training (Abdullah et al., 2014). More important is entrepreneurial training which has been reported to have positive effect on SMEs' development (Dele and Okpa, 2020). Findings of this study revealed that the majority of employees did not have an opportunity to go for training to enhance their technical skills and knowledge; 46% of the employees indicated that they had received some training whilst 51% of the employees had not received any training. MSME owners cited high training costs as a contributing factor. Among those that had an opportunity to go for training, only 5.2% indicated said that they go for training very often, 35.9% go often, and another 5.2% rarely go; whereas 51.2% do not go for training. This lack of training for staff could negatively affect the MSMEs innovativeness. There is need for the MSMEs owners to take entrepreneurial training seriously if they are to become innovative, survive and remain competitive survive as the business world experience is much more than an academic exercise (Abdullah et al., 2014; Dele and Okpa, 2020).

The study explored the barriers to innovations among the MSMEs under study. In order to achieve this, the study first sought the MSMEs general understanding of innovation and its benefits to their businesses. The study further sought to assess whether those with understanding of innovation were engaged in any innovation activities. Findings showed that most business owners understood the term innovation in their businesses: 94.9% of the respondents defined innovation as follows: making new products on the market (31%); adding value to an already existing product (26%); making goods that meet international standards (13%); and 23% of the MSME owner were aware of innovation but failed to describe it. The results also showed that most business owners were involved in various innovation activities (74.4%); These included producing unique/ innovative goods in their businesses such as bags, wedding suits, door frames with new designs, new king-sized beds, new charcoal burners with double holes and four corners, new flavoured tomato sauce and many more. In order to demonstrate their awareness of product innovation and its importance, they cited various products such as low-cost cane furniture, the modern wood saver burner, ladies' bags made from *chitenje* (cloth), new energy saver bulbs, Sanwecka halogen cooker and flavoured food stuffs among others. On challenges to innovation, the MSMEs provided the following (Table 4) as their perceived internal and external barriers to innovation.

Lack of financial resources topped the list of internal barriers to innovation with 74% followed by poor financial performance and lack of qualified personnel, both at 36%. Among the external barriers, market competition (59%), difficulty in accessing loans (46%) and lack of government support make the top three. From the results, it is clear that the MSMEs understood the concept of innovation and the importance of engaging in innovative activities despite their levels of education.

Table 4. Perceived internal and external innovation barriers.

Rank	Internal Barrier	External Barrier
1	Lack of financial resources (74%)	Market competition (59%)
2	Poor financial performance (36%)	Difficulty in accessing to loans (46%)
3	Lack of qualified personnel (36%)	Lack of government support (44%)
4	Lack of long-term vision by management (15%)	Labour laws, taxes and regulations (36%)
5	Problem keeping qualified personnel (13%)	Fluctuations in market prices (33%)
6	Resistance to change by management and employees (13%)	Changes in technology (33%)
7	Management failure to promote creativity (13%)	Training costs (26%)
8	General enterprise policy (10%)	Lack of cooperation with research and training institutions (23%)
9	Poor team work (10%)	Consumer response (acceptance to new products) (21%)
10	Risk of failure (8%)	Lack of information on market needs (15%)
11	Lack of resources to experiment and recover in case the experiment fails to pay dividends (8%)	Licenses, patents and policies (10%)

Lack of understanding of innovation cannot therefore be attributed to lack of understanding of innovation. This is supported by the fact that lack of understanding of innovation was not cited as one of the internal barriers to MSMEs' ability to innovate. It is also evident from the results that MSMEs face a lot of innovation barriers towards their manufacturing activities. Lack of financial resources topped the list of major internal barrier to innovation followed by poor financial performance and lack of qualified personnel. These results are supported by findings of other researchers (Nassar and Faloye, 2015; Pachouri and Sharma, 2016; Talegeta, 2014; Kamalian et al., 2011; Piperopoulos, 2007) who have singled out lack of finances as one major barrier of innovation in developing countries. The top three external barriers that is, market competition, difficulty in accessing loans and lack of government support are somehow linked to finances and therefore agree with the perception that lack of finances is the major internal barrier. MSMEs need to engage in innovation to grow, survive and remain competitive (Okpara, 2007; Oksanen and Technical, 2009; Szabo and Herman, 2012). In order to achieve this, MSMEs need financial investments. This most probably explains why difficulty in accessing loans and lack of government support also highly ranked among the external barriers. It can therefore be concluded that lack of financial capacity is the major barrier to innovation among these Malawi MSMEs as failure to innovative among small and medium enterprises is often associated with financial constraints (Brancati, 2015; Bukstein et al., 2019). Risk of failure was also cited as one of the internal barriers to innovation among the MSMEs under study. This underscores the importance of having enough financial capacity and resources to experiment and recover in case the innovation failed. The MSMEs feared that the new product could not sell on the market. For the MSMEs to penetrate the market they need a strong financial base to experiment on their innovations and have a fall back plan. Despite the fact that market competition is usually regarded as a stimulator of innovation, most MSMEs struggle to make more sales and profit to raise adequate financial resources for their capital. This affects negatively their capacity and ability to innovate and hence putting them at a disadvantage in terms of market competition. Lack of financial resources also links well with provision of financial support being ranked highly among the proposed government interventions. This indicates that MSMEs considered Government as a key partner in the promotion and diffusion of innovation in the MSMEs. This probably could be attributed to the fact that access to loans from commercial banks in Malawi is prohibitive due to high interest rates (Zidana, 2016). There is therefore need for government of Malawi to come up with policies that will eliminate or alleviate lack of financial resources as major internal barrier to innovation (Hadjimanolis, 1999).

Government support is highly critical for the success on new ventures; this support can be in the form of policies and programs to promote new ventures regarding financial and nonfinancial support (Anwar et al., 2020). It is also important to spearhead innovation of SMEs and this can be achieved through formulation of government support policies and strategies (Doh and Kim, 2014). In Malawi, the Government instituted an MSME Policy Strategy (2012-2017) aimed at creating a modern and effective framework to guide the development of profitable, competitive and sustainable MSMEs in Malawi. Among the proposed activities was the eestablishment of the Malawi Innovation Challenge Fund instruments to promote business-to- business linkages, improve the competitiveness of local firms and transfer of skills and technology to MSMEs. However, despite this policy intervention finding revealed that 92% of the MSMEs were not aware of the existence of any government innovation improvement programs and had never taken part. One respondent in the furniture business at *Kudya* business centre explained that *'he was not aware of the existence of any government innovation programs and*

Table 5. Proposed government interventions.

Rank	Proposed Government Intervention	Respondents (%)
1	Provide financial support	46
2	Provide Training	18
3	Find markets for MSMEs	13
4	Promote locally produced goods	11
5	Provide general support	5
6	Establish cooperatives	3

explained that if such programs really exist; then it means that they were never passed on down to the users. They just end right there where they are formulated'. Such a response implies that there is lack of communication or interaction between the government (policy formulators) and the MSMEs. Only 5% of the respondents were aware of the interventions and that at one point in time they were involved in government programmes aimed at improving innovation in MSMEs. Lack of awareness of government interventions could also be a possible barrier to MSMEs innovation efforts. The MSMEs gave six critical areas for government's intervention: provision of financial support, provision of training, finding markets, promotion of locally produced goods, providing general support and establishment of cooperatives (Table 5).

Among the six, provision of financial support ranked highly. This relates well with the top ranked internal (lack of financial resources) and external (market competiveness) barriers. Collaboration with government, universities research and development is essential to promote innovation among MSMEs is essential for supporting SMEs' innovativeness in emerging economies (Handoko et al., 2014; Zeng et al., 2010). Universities and, Research and Development Institutions (RDIs) are creators of new knowledge and technologies which when transferred appropriately can help MSMEs in developing innovations (Tambunan, 2009; Markman et al., 2005). The results of this study revealed that most of the MSMEs (71.8%) had the opinion that these RDIs were not doing much to promote innovation among the MSMEs. The results also revealed that there is weak relationship between MSMEs and RDIs in Malawi, and this has the potential to negatively affect the innovation activities in the MSMEs (Zeng et al., 2010). This weak relationship could be attributed to inadequate finances as RDI activities require financial investment. There is also need for the MSMEs not only to link with RDIs but also in invest in R & D activities to support their innovation (Oudgou, 2021; Tiwari and Buse, 2007). Collaboration with training institutions such as universities is also essential for propagation and support of innovations among the MSMEs. MSMEs need skilled labour to support their innovations and propagate the innovation culture within their organisations. In this study, lack of skilled personnel ranked third as an internal barrier. This reflects on this weak linkage between the MSMEs and training institutions in Malawi hence lack of skilled labour remains a barrier to innovation (Kamalian et al., 2011).

Conclusion

It is widely accepted that innovation is critical in achieving sustainable growth and competitiveness of MSMEs. The study has established that the MSMEs are aware of the critical role of innovation in their MSMEs; however they are facing both internal and external challenges. Internal challenges are mainly centred on finances: MSMEs lack financial resources to experiment on new products and grow their businesses. Amongst all, market competition, difficulty in accessing loans, fluctuations in market prices, and lack of government support ranks high. The government has a major role to play in overcoming most of the innovation barriers encountered by MSMEs. It is therefore imperative that government steps in and support them. The success of these MSMEs depends on how much support government gives them. This support can be in a form provision of financial resources, training, promotion of locally produced goods and market identification (internal or external) for the locally produce goods.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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